

4/19/2016
Ms. Cecilia Greene
Auxier & Associates, Inc.
9821 Cogdill Road, Suite 1

Knoxville TN 37932

Project Name: West Lake Landfill

Project #:
Workorder #: 1604014

Dear Ms. Cecilia Greene

The following report includes the data for the above referenced project for sample(s) received on 4/1/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Passive S.E. RAD130/SKC are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

A Eurofins Lancaster Laboratories Company

WORK ORDER #: 1604014

Work Order Summary

CLIENT:	Ms. Cecilia Greene Auxier & Associates, Inc. 9821 Cogdill Road, Suite 1 Knoxville, TN 37932	BILL TO:	Ms. Cecilia Greene Auxier & Associates, Inc. 9821 Cogdill Road, Suite 1 Knoxville, TN 37932
PHONE:	865-675-3669	P.O. #	
FAX:	865-675-3677	PROJECT #	West Lake Landfill
DATE RECEIVED:	04/01/2016	CONTACT:	Kelly Buettner
DATE COMPLETED:	04/14/2016		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	ENGWESA001	Passive S.E. RAD130/SKC
02A	ENGWESA005	Passive S.E. RAD130/SKC
03A	ENGWESA007	Passive S.E. RAD130/SKC
04A	ENGWESA008	Passive S.E. RAD130/SKC
05A	ENGWESA012	Passive S.E. RAD130/SKC
06A	Duplicate	Passive S.E. RAD130/SKC
07A	TRIP BLANK	Passive S.E. RAD130/SKC
08A	Lab Blank	Passive S.E. RAD130/SKC
09A	LCS	Passive S.E. RAD130/SKC
09AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY:



DATE: 04/14/16

Technical Director

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive SE by Mod EPA TO-17
Auxier & Associates, Inc.
Workorder# 1604014

Seven Radiello 130 (Solvent) samples were received on April 01, 2016. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	TO-17	ATL Modifications
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The uptake rates were corrected based on average field temperatures if provided. In the absence of field temperatures, the uptake rates determined at 25 deg C were used.

To calculate ug/m³ concentrations in the Lab Blank and Trip Blank, a sampling duration of 21,768 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: ENGWESA001**Lab ID#: 1604014-01A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.060	0.10	0.060
1,2,4-Trimethylbenzene	0.10	0.092	0.10	0.092
2-Butanone (Methyl Ethyl Ketone)	0.10	0.058	0.32	0.18
Acetone	0.20	0.12	0.47	0.28
Benzene	0.40	0.23	0.62	0.35
Carbon Tetrachloride	0.10	0.068	0.50	0.35
Cyclohexane	0.10	0.085	0.11	0.090
Ethyl Benzene	0.10	0.068	0.11	0.076
Heptane	0.10	0.079	0.35	0.28
Hexane	0.10	0.070	0.27	0.18
Toluene	0.10	0.062	0.86	0.53
Tetrachloroethylene	0.10	0.078	0.11	0.088
m,p-Xylene	0.10	0.066	0.29	0.19
o-Xylene	0.10	0.071	0.10	0.074

Client Sample ID: ENGWESA005**Lab ID#: 1604014-02A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.063	0.10	0.066
1,2,4-Trimethylbenzene	0.10	0.098	0.12	0.11
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.39	0.24
Acetone	0.20	0.13	0.64	0.40
Benzene	0.40	0.24	0.69	0.42
Carbon Tetrachloride	0.10	0.073	0.49	0.36
Cyclohexane	0.10	0.090	0.11	0.098
Ethyl Benzene	0.10	0.072	0.11	0.079
Heptane	0.10	0.084	0.19	0.16
Hexane	0.10	0.074	0.27	0.20
Toluene	0.10	0.066	0.77	0.51
m,p-Xylene	0.10	0.070	0.28	0.20
o-Xylene	0.10	0.075	0.10	0.076



Air Toxics

Summary of Detected Compounds VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: ENGWESA007**Lab ID#: 1604014-03A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.063	0.10	0.064
1,2,4-Trimethylbenzene	0.10	0.098	0.12	0.12
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.40	0.25
Acetone	0.20	0.13	0.83	0.53
Benzene	0.40	0.24	0.74	0.45
Carbon Tetrachloride	0.10	0.073	0.49	0.36
Cyclohexane	0.10	0.090	0.12	0.11
Ethyl Benzene	0.10	0.072	0.12	0.090
Heptane	0.10	0.084	0.22	0.18
Hexane	0.10	0.074	0.29	0.21
Toluene	0.10	0.066	0.88	0.58
Tetrachloroethene	0.10	0.083	0.10	0.083
m,p-Xylene	0.10	0.070	0.30	0.21
o-Xylene	0.10	0.075	0.11	0.081

Client Sample ID: ENGWESA008**Lab ID#: 1604014-04A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.060	0.11	0.068
1,2,4-Trimethylbenzene	0.10	0.092	0.12	0.11
2-Butanone (Methyl Ethyl Ketone)	0.10	0.058	0.41	0.24
Acetone	0.20	0.12	0.64	0.38
Benzene	0.40	0.23	0.85	0.49
Carbon Tetrachloride	0.10	0.069	0.52	0.36
Ethyl Benzene	0.10	0.068	0.12	0.084
Heptane	0.10	0.079	0.20	0.16
Hexane	0.10	0.070	0.48	0.33
Toluene	0.10	0.062	0.82	0.51
m,p-Xylene	0.10	0.066	0.32	0.21
o-Xylene	0.10	0.071	0.11	0.078



Air Toxics

Summary of Detected Compounds VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: ENGWESA012**Lab ID#: 1604014-05A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.39	0.24
Acetone	0.20	0.13	0.58	0.37
Benzene	0.40	0.25	0.66	0.40
Carbon Tetrachloride	0.10	0.074	0.64	0.47
Chloroform	0.10	0.066	0.12	0.077
Ethyl Benzene	0.10	0.072	0.11	0.080
Heptane	0.10	0.085	0.18	0.16
Hexane	0.10	0.075	0.31	0.23
Toluene	0.10	0.067	0.67	0.44
m,p-Xylene	0.10	0.070	0.25	0.18

Client Sample ID: Duplicate**Lab ID#: 1604014-06A**

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,2-Dichloroethane	0.10	0.063	0.11	0.067
1,2,4-Trimethylbenzene	0.10	0.098	0.13	0.13
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.43	0.27
Acetone	0.20	0.13	0.90	0.57
Benzene	0.40	0.24	0.78	0.48
Carbon Tetrachloride	0.10	0.073	0.51	0.37
Cyclohexane	0.10	0.090	0.12	0.11
Ethyl Benzene	0.10	0.072	0.13	0.091
Heptane	0.10	0.084	0.22	0.19
Hexane	0.10	0.074	0.31	0.23
Toluene	0.10	0.066	0.91	0.60
m,p-Xylene	0.10	0.070	0.32	0.22
o-Xylene	0.10	0.075	0.11	0.086

Client Sample ID: TRIP BLANK**Lab ID#: 1604014-07A**

No Detections Were Found.



Air Toxics

Client Sample ID: ENGWESA001

Lab ID#: 1604014-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040412sim	Date of Collection:	3/31/16 10:38:00 AM	
Dil. Factor:	1.00	Date of Analysis:	4/4/16 12:35 PM	
		Date of Extraction:	4/4/16	
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.076	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.074	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.060	0.10	0.060
1,2,4-Trimethylbenzene	0.10	0.092	0.10	0.092
1,4-Dichlorobenzene	0.10	0.090	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.058	0.32	0.18
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.12	0.47	0.28
Benzene	0.40	0.23	0.62	0.35
Carbon Tetrachloride	0.10	0.068	0.50	0.35
Chlorobenzene	0.10	0.068	Not Detected	Not Detected
Chloroform	0.10	0.061	Not Detected	Not Detected
Cyclohexane	0.10	0.085	0.11	0.090
Ethanol	1.0	0.45	Not Detected	Not Detected
Ethyl Acetate	0.40	0.24	Not Detected	Not Detected
Ethyl Benzene	0.10	0.068	0.11	0.076
Heptane	0.10	0.079	0.35	0.28
Hexane	0.10	0.070	0.27	0.18
Methyl tert-butyl ether	0.10	0.071	Not Detected	Not Detected
Naphthalene	0.10	0.18	Not Detected	Not Detected
Propylbenzene	0.10	0.080	Not Detected	Not Detected
Styrene	0.10	0.075	Not Detected	Not Detected
Toluene	0.10	0.062	0.86	0.53
Tetrachloroethene	0.10	0.078	0.11	0.088
Trichloroethene	0.10	0.066	Not Detected	Not Detected
m,p-Xylene	0.10	0.066	0.29	0.19
o-Xylene	0.10	0.071	0.10	0.074

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 21768 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130



Air Toxics

Client Sample ID: ENGWESA005

Lab ID#: 1604014-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040413sim	Date of Collection: 3/30/16 1:03:00 PM		
Dil. Factor:	1.00	Date of Analysis: 4/4/16 12:58 PM		
		Date of Extraction: 4/4/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.081	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.079	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.063	0.10	0.066
1,2,4-Trimethylbenzene	0.10	0.098	0.12	0.11
1,4-Dichlorobenzene	0.10	0.096	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.39	0.24
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.13	0.64	0.40
Benzene	0.40	0.24	0.69	0.42
Carbon Tetrachloride	0.10	0.073	0.49	0.36
Chlorobenzene	0.10	0.072	Not Detected	Not Detected
Chloroform	0.10	0.065	Not Detected	Not Detected
Cyclohexane	0.10	0.090	0.11	0.098
Ethanol	1.0	0.48	Not Detected	Not Detected
Ethyl Acetate	0.40	0.25	Not Detected	Not Detected
Ethyl Benzene	0.10	0.072	0.11	0.079
Heptane	0.10	0.084	0.19	0.16
Hexane	0.10	0.074	0.27	0.20
Methyl tert-butyl ether	0.10	0.075	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.086	Not Detected	Not Detected
Styrene	0.10	0.080	Not Detected	Not Detected
Toluene	0.10	0.066	0.77	0.51
Tetrachloroethene	0.10	0.083	Not Detected	Not Detected
Trichloroethene	0.10	0.071	Not Detected	Not Detected
m,p-Xylene	0.10	0.070	0.28	0.20
o-Xylene	0.10	0.075	0.10	0.076

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20503 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130



Air Toxics

Client Sample ID: ENGWESA007

Lab ID#: 1604014-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040414sim	Date of Collection: 3/30/16 12:41:00 PM		
Dil. Factor:	1.00	Date of Analysis: 4/4/16 01:21 PM		
		Date of Extraction: 4/4/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.081	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.079	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.063	0.10	0.064
1,2,4-Trimethylbenzene	0.10	0.098	0.12	0.12
1,4-Dichlorobenzene	0.10	0.096	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.40	0.25
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.13	0.83	0.53
Benzene	0.40	0.24	0.74	0.45
Carbon Tetrachloride	0.10	0.073	0.49	0.36
Chlorobenzene	0.10	0.072	Not Detected	Not Detected
Chloroform	0.10	0.065	Not Detected	Not Detected
Cyclohexane	0.10	0.090	0.12	0.11
Ethanol	1.0	0.48	Not Detected	Not Detected
Ethyl Acetate	0.40	0.25	Not Detected	Not Detected
Ethyl Benzene	0.10	0.072	0.12	0.090
Heptane	0.10	0.084	0.22	0.18
Hexane	0.10	0.074	0.29	0.21
Methyl tert-butyl ether	0.10	0.075	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.086	Not Detected	Not Detected
Styrene	0.10	0.080	Not Detected	Not Detected
Toluene	0.10	0.066	0.88	0.58
Tetrachloroethene	0.10	0.083	0.10	0.083
Trichloroethene	0.10	0.071	Not Detected	Not Detected
m,p-Xylene	0.10	0.070	0.30	0.21
o-Xylene	0.10	0.075	0.11	0.081

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20466 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130



Air Toxics

Client Sample ID: ENGWESA008

Lab ID#: 1604014-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040415sim	Date of Collection:	3/31/16 9:54:00 AM	
Dil. Factor:	1.00	Date of Analysis:	4/4/16 01:44 PM	
		Date of Extraction:	4/4/16	
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.077	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.074	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.060	0.11	0.068
1,2,4-Trimethylbenzene	0.10	0.092	0.12	0.11
1,4-Dichlorobenzene	0.10	0.090	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.058	0.41	0.24
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.12	0.64	0.38
Benzene	0.40	0.23	0.85	0.49
Carbon Tetrachloride	0.10	0.069	0.52	0.36
Chlorobenzene	0.10	0.068	Not Detected	Not Detected
Chloroform	0.10	0.061	Not Detected	Not Detected
Cyclohexane	0.10	0.085	Not Detected	Not Detected
Ethanol	1.0	0.45	Not Detected	Not Detected
Ethyl Acetate	0.40	0.24	Not Detected	Not Detected
Ethyl Benzene	0.10	0.068	0.12	0.084
Heptane	0.10	0.079	0.20	0.16
Hexane	0.10	0.070	0.48	0.33
Methyl tert-butyl ether	0.10	0.071	Not Detected	Not Detected
Naphthalene	0.10	0.18	Not Detected	Not Detected
Propylbenzene	0.10	0.081	Not Detected	Not Detected
Styrene	0.10	0.076	Not Detected	Not Detected
Toluene	0.10	0.062	0.82	0.51
Tetrachloroethene	0.10	0.078	Not Detected	Not Detected
Trichloroethene	0.10	0.067	Not Detected	Not Detected
m,p-Xylene	0.10	0.066	0.32	0.21
o-Xylene	0.10	0.071	0.11	0.078

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 21694 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130



Air Toxics

Client Sample ID: ENGWESA012

Lab ID#: 1604014-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040416sim	Date of Collection: 3/30/16 9:59:00 AM		
Dil. Factor:	1.00	Date of Analysis: 4/4/16 02:08 PM		
		Date of Extraction: 4/4/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.082	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.080	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.064	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.099	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.097	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.39	0.24
4-Methyl-2-pentanone	0.20	0.15	Not Detected	Not Detected
Acetone	0.20	0.13	0.58	0.37
Benzene	0.40	0.25	0.66	0.40
Carbon Tetrachloride	0.10	0.074	0.64	0.47
Chlorobenzene	0.10	0.072	Not Detected	Not Detected
Chloroform	0.10	0.066	0.12	0.077
Cyclohexane	0.10	0.091	Not Detected	Not Detected
Ethanol	1.0	0.48	Not Detected	Not Detected
Ethyl Acetate	0.40	0.25	Not Detected	Not Detected
Ethyl Benzene	0.10	0.072	0.11	0.080
Heptane	0.10	0.085	0.18	0.16
Hexane	0.10	0.075	0.31	0.23
Methyl tert-butyl ether	0.10	0.076	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.086	Not Detected	Not Detected
Styrene	0.10	0.081	Not Detected	Not Detected
Toluene	0.10	0.067	0.67	0.44
Tetrachloroethene	0.10	0.084	Not Detected	Not Detected
Trichloroethene	0.10	0.071	Not Detected	Not Detected
m,p-Xylene	0.10	0.070	0.25	0.18
o-Xylene	0.10	0.076	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20274 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130



Air Toxics

Client Sample ID: Duplicate**Lab ID#: 1604014-06A****VOCS BY PASSIVE SAMPLER - GC/MS**

File Name:	10040417sim	Date of Collection:	3/30/16 12:41:00 PM	
Dil. Factor:	1.00	Date of Analysis:	4/4/16 02:31 PM	
		Date of Extraction:	4/4/16	
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.081	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.079	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.063	0.11	0.067
1,2,4-Trimethylbenzene	0.10	0.098	0.13	0.13
1,4-Dichlorobenzene	0.10	0.096	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.062	0.43	0.27
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.13	0.90	0.57
Benzene	0.40	0.24	0.78	0.48
Carbon Tetrachloride	0.10	0.073	0.51	0.37
Chlorobenzene	0.10	0.072	Not Detected	Not Detected
Chloroform	0.10	0.065	Not Detected	Not Detected
Cyclohexane	0.10	0.090	0.12	0.11
Ethanol	1.0	0.48	Not Detected	Not Detected
Ethyl Acetate	0.40	0.25	Not Detected	Not Detected
Ethyl Benzene	0.10	0.072	0.13	0.091
Heptane	0.10	0.084	0.22	0.19
Hexane	0.10	0.074	0.31	0.23
Methyl tert-butyl ether	0.10	0.075	Not Detected	Not Detected
Naphthalene	0.10	0.20	Not Detected	Not Detected
Propylbenzene	0.10	0.086	Not Detected	Not Detected
Styrene	0.10	0.080	Not Detected	Not Detected
Toluene	0.10	0.066	0.91	0.60
Tetrachloroethene	0.10	0.083	Not Detected	Not Detected
Trichloroethene	0.10	0.071	Not Detected	Not Detected
m,p-Xylene	0.10	0.070	0.32	0.22
o-Xylene	0.10	0.075	0.11	0.086

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 20466 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130



Air Toxics

Client Sample ID: TRIP BLANK

Lab ID#: 1604014-07A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040411sim	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 4/4/16 12:12 PM		
		Date of Extraction: 4/4/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.076	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.074	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.060	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.092	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.090	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.058	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.12	Not Detected	Not Detected
Benzene	0.40	0.23	Not Detected	Not Detected
Carbon Tetrachloride	0.10	0.068	Not Detected	Not Detected
Chlorobenzene	0.10	0.068	Not Detected	Not Detected
Chloroform	0.10	0.061	Not Detected	Not Detected
Cyclohexane	0.10	0.085	Not Detected	Not Detected
Ethanol	1.0	0.45	Not Detected	Not Detected
Ethyl Acetate	0.40	0.24	Not Detected	Not Detected
Ethyl Benzene	0.10	0.068	Not Detected	Not Detected
Heptane	0.10	0.079	Not Detected	Not Detected
Hexane	0.10	0.070	Not Detected	Not Detected
Methyl tert-butyl ether	0.10	0.071	Not Detected	Not Detected
Naphthalene	0.10	0.18	Not Detected	Not Detected
Propylbenzene	0.10	0.080	Not Detected	Not Detected
Styrene	0.10	0.075	Not Detected	Not Detected
Toluene	0.10	0.062	Not Detected	Not Detected
Tetrachloroethene	0.10	0.078	Not Detected	Not Detected
Trichloroethene	0.10	0.066	Not Detected	Not Detected
m,p-Xylene	0.10	0.066	Not Detected	Not Detected
o-Xylene	0.10	0.071	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 21768 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1604014-08A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040406sim	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 4/4/16 10:15 AM		
		Date of Extraction: 4/4/16		
Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
1,1,2,2-Tetrachloroethane	0.10	0.076	Not Detected C	Not Detected C
1,1,1-Trichloroethane	0.10	0.074	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.060	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.092	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.090	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	0.058	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.14	Not Detected	Not Detected
Acetone	0.20	0.12	Not Detected	Not Detected
Benzene	0.40	0.23	Not Detected	Not Detected
Carbon Tetrachloride	0.10	0.068	Not Detected	Not Detected
Chlorobenzene	0.10	0.068	Not Detected	Not Detected
Chloroform	0.10	0.061	Not Detected	Not Detected
Cyclohexane	0.10	0.085	Not Detected	Not Detected
Ethanol	1.0	0.45	Not Detected	Not Detected
Ethyl Acetate	0.40	0.24	Not Detected	Not Detected
Ethyl Benzene	0.10	0.068	Not Detected	Not Detected
Heptane	0.10	0.079	Not Detected	Not Detected
Hexane	0.10	0.070	Not Detected	Not Detected
Methyl tert-butyl ether	0.10	0.071	Not Detected	Not Detected
Naphthalene	0.10	0.18	Not Detected	Not Detected
Propylbenzene	0.10	0.080	Not Detected	Not Detected
Styrene	0.10	0.075	Not Detected	Not Detected
Toluene	0.10	0.062	Not Detected	Not Detected
Tetrachloroethene	0.10	0.078	Not Detected	Not Detected
Trichloroethene	0.10	0.066	Not Detected	Not Detected
m,p-Xylene	0.10	0.066	Not Detected	Not Detected
o-Xylene	0.10	0.071	Not Detected	Not Detected

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 21768 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1604014-09A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040404sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/4/16 09:29 AM
		Date of Extraction:	4/4/16

Compound	%Recovery	Method Limits
1,1,2,2-Tetrachloroethane	114	70-130
1,1,1-Trichloroethane	114	70-130
1,2-Dichloroethane	107	70-130
1,2,4-Trimethylbenzene	111	70-130
1,4-Dichlorobenzene	100	50-110
2-Butanone (Methyl Ethyl Ketone)	102	70-130
4-Methyl-2-pentanone	115	70-130
Acetone	97	70-130
Benzene	110	70-130
Carbon Tetrachloride	115	70-130
Chlorobenzene	108	70-130
Chloroform	108	70-130
Cyclohexane	116	70-130
Ethanol	69	50-130
Ethyl Acetate	106	70-130
Ethyl Benzene	126	70-130
Heptane	125	70-130
Hexane	121	70-130
Methyl tert-butyl ether	108	70-130
Naphthalene	12	5-80
Propylbenzene	116	70-130
Styrene	65	20-100
Toluene	114	70-130
Tetrachloroethene	118	70-130
Trichloroethene	114	70-130
m,p-Xylene	112	70-130
o-Xylene	108	70-130

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1604014-09AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	10040405sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/4/16 09:52 AM
		Date of Extraction:	4/4/16

Compound	%Recovery	Method Limits
1,1,2,2-Tetrachloroethane	108	70-130
1,1,1-Trichloroethane	114	70-130
1,2-Dichloroethane	110	70-130
1,2,4-Trimethylbenzene	106	70-130
1,4-Dichlorobenzene	95	50-110
2-Butanone (Methyl Ethyl Ketone)	114	70-130
4-Methyl-2-pentanone	119	70-130
Acetone	111	70-130
Benzene	106	70-130
Carbon Tetrachloride	128	70-130
Chlorobenzene	106	70-130
Chloroform	126	70-130
Cyclohexane	114	70-130
Ethanol	77	50-130
Ethyl Acetate	118	70-130
Ethyl Benzene	120	70-130
Heptane	128	70-130
Hexane	156	70-130
Methyl tert-butyl ether	108	70-130
Naphthalene	12	5-80
Propylbenzene	110	70-130
Styrene	64	20-100
Toluene	113	70-130
Tetrachloroethene	118	70-130
Trichloroethene	117	70-130
m,p-Xylene	108	70-130
o-Xylene	104	70-130

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130